August 4, 2017

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Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Written *Ex Parte* Presentation: *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, IB Docket No. 16-408

Dear Ms. Dortch:

SES S.A, O3b Limited, The Boeing Company, Inmarsat, Inc. and ViaSat, Inc. submit this *ex parte* filing to emphasize the benefits of allowing fixed-satellite service ("FSS") operators to deploy blanket licensed terminals in the 17.8-18.3 GHz band on a secondary basis and to underscore that such operations will not adversely affect either terrestrial licensees in the band or FSS customers.

In the Notice of Proposed Rulemaking issued in the above referenced proceeding, the Commission proposed to create a secondary allocation for the FSS in the 17.8-18.3 GHz band, recognizing that existing power flux density ("PFD") limits established by the International Telecommunication Union would be sufficient to protect terrestrial fixed service ("FS") operations in the band.[1] The Commission went on to suggest that secondary FSS use of the band should be limited to individually licensed earth stations based on an assumption that they would be "more likely than ubiquitously deployed user terminals to be able to operate successfully on an unprotected basis with respect to primary FS stations."[2]

Several commenters supported the Commission's proposal to create a designation for FSS in the band, but objected that limiting FSS use to individually licensed earth stations was unnecessarily constraining.[3] These parties emphasized that the fact that 17.8-18.3 GHz

[1] *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Notice of Proposed Rulemaking, IB Docket No. 16-408, ¶9 (Dec. 14, 2016).
[2] *Id*.
[3] *See* Comments of SES S.A. and O3b Limited, IB Docket No. 16-408 (Feb. 27, 2017) ("SES/O3b Comments") at 10-13; Comments of The Boeing Company, IB Docket No. 16-408 (Feb. 27, 2017) at 2-4; Comments of Inmarsat, Inc., IB Docket No. 16-408 (Feb. 27, 2017) ("Inmarsat Comments") at 3; Comments of ViaSat, Inc., IB docket No. 16-408 (Feb. 27, 2017) ("ViaSat Comments") at 7-8. Some commenters also recommended that the Commission allow

frequencies would be used for downlink satellite transmissions will guarantee that FS operators will not experience any interference from the terminals themselves and that PFD limits already in place will protect FS operators from the satellite transmissions.[4] Moreover, the nature of the earth station that is receiving satellite signals transmitted to the Earth's surface has no bearing on spectrum compatibility with terrestrial services in the band. Stated another way, the nature and number of earth stations passively receiving satellite signals does not present any risk to terrestrial services in this context. Furthermore, the commenters observed that the FSS terminals' secondary status will preclude FSS operators from claiming protection from any interference caused by the primary FS operations.

In recognition of the limits of secondary operations, the FSS commenters committed to ensuring that they can provide continuous service to blanket licensed terminals even if the 17.8-18.3 GHz band is not available in a given area for a period of time or indefinitely due to interference from FS operations. As The Boeing Company noted in its comments, any operations on a secondary basis "will depend primarily on dynamic methods employed by satellite system operators to avoid interference, such as using minimum operational elevation angles, selectively increasing satellite power (within PFD limits), assigning earth stations to alternative frequency channels or satellites, applying earth station shielding, or any combination of the above."[5] These approaches will allow FSS networks to adjust their operations in order to maintain service to blanket licensed terminals in response to any interference from primary FS use of the spectrum.

Finally, we emphasize that the Commission reached a similar conclusion in granting a waiver of the United States Table of Frequency Allocations to enable the reception of satellite signals by large numbers of earth stations on an unprotected, non-conforming basis in other spectrum that otherwise was not available for such purposes. In doing so the Commission found that allowing such operations on a non-interference basis:

> [W]ould not undermine the rule's purpose because it involves only passive receive-only earth stations that are not capable of causing interference into FS stations operating in this band. Further, because [the operator] has agreed to accept any level of interference from FS stations into its receive-only earth stations' operations in the extended Ku-bands, FS operators will not be required to coordinate their station operations with the . . . receive-only earth stations' operations. Under these circumstances, we determine that additional coordination

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individually licensed earth stations to access the 17.8-18.3 GHz band on a co-primary basis with FS operations. *See* SES/O3b Comments at 10-11; Inmarsat Comments at 3.

[4] SES/O3b Comments at 11-12; Boeing Comments at 3; Inmarsat Comments at 3; ViaSat Comments at 7-8; Comments of Leosat MA, Inc., IB Docket No. 16-408, at 4-5 (Feb. 27, 2017); Comments of Space Exploration Technologies Corp., IB Docket No. 16-408, at 4 (Feb. 27, 2017).

[5] Boeing Comments at 3.

> burden would not be placed upon FS operators and that their ability to expand service in the future would not in any manner be restricted.[6]

Based on these facts, there is no reason to preclude FSS use of the 17.8-18.3 GHz band for blanket licensed terminals on a secondary basis. Instead, expanding the permissible use of this band would greatly enhance the service options FSS operators could offer and improve overall use of the frequencies to the benefit of consumers.

Respectfully submitted,

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[6] *EchoStar Satellite LLC*, 20 FCC Rcd 930, at ¶ 13 (2004). *See also* SES Satellites (Gibraltar) Limited, File No. SAT-MPL-20160718-00063, Attachment to Grant, Condition 3, granted Dec. 14, 2016; Intelsat License LLC, File No. SAT-MOD-20170523-00077, as amended by SAT-AMD-20170613-00089, Attachment to Grant, Condition 8, granted July 20, 2017.